

CLAIMS

1. Lock for doors or hatches of vehicles,
 - with a permanently supported rotary catch (20), into which a locking part (10) travels when the door or hatch is closed, thus pivoting the rotary catch (20) from an initial open position into a pre-latching position (20.1);
 - where the rotary catch (20) is spring-loaded (25) in the direction toward its open position;
 - with a permanently supported, spring-loaded (35) pawl (30), which, when the catch is in the pre-latching position (20.1), engages with a preliminary notch (21) in the rotary catch (20);
 - with a motorized (52) closing assist mechanism for the door or hatch, comprising a gearbox (53) with a cam (50);
 - with control means for turning the motor (52) on and off;
 - where, when the motor is turned on, the movement (55) of the cam (50) moves the rotary catch (20) from the pre-latching position (20.1) to the main latching position (20.3), which is secured by the pawl (30), which engages with the main notch (22) of the rotary catch (20),
- characterized in that

-- a pair of toggle-joint levers (40) and a spring-loaded driver (33) are installed between the cam (50) and the rotary catch (20); in that

-- the driver (33) is hinged to the free end (42) of the toggle-joint lever pair (40), and the driver (33) is held by spring-loading (37) against a stationary end surface (18), at least when the rotary catch (20) is in the pre-latching position (20.1); in that

-- the free end (42) of the toggle-joint lever pair (40) is positively guided by guide means (15) in the lock housing (11),

-- whereas the other, fixed end (41) of the toggle-joint lever pair (40) is rotatably mounted on a stationary bearing (14); in that

-- the cam (50) has a control curve (51), against which the toggle-joint lever pair (40) is held; and in that

-- the driver (33) has a shoulder (34), which, when the catch is in the open position, is a certain distance away (36) from an opposing shoulder (24) provided on the rotary catch (20),

-- whereas, during the motorized (52) closing movement, the toggle-joint lever pair (40) extends (40.2) or inflects (40.1), as a result of which the shoulder (34) of the driver (33) grips

the opposing shoulder (24) of the rotary catch (20) and rotates the rotary catch (20) from its pre-latching position (20.1) to the main latching position (20.3).

2. Lock according to Claim 1, characterized in that the toggle-joint lever pair (40) is held in the area (43) of its toggle joint against the cam (50).

3. Lock according to Claim 1 and Claim 2, characterized in that the guide means consists of a guide rod (15), one end (16) of which is hinged to the free end (42) of the toggle-joint lever pair (40), whereas the other end (17) of the guide rod is mounted on a stationary bearing (12).

4. Lock according to Claim 3, characterized in that the stationary bearing of the guide rod (15) is simultaneously the bearing (12) of the rotary catch (20).

5. Lock according to one of Claims 1-4, characterized in that the hinge point of the guide rod (15) on the toggle-joint lever pair (40) is simultaneously the hinge point for the driver (33).

6. Lock according to one of Claims 1-5, characterized in that the spring-loading (37) of the driver (33) consists of a shank spring, which is seated in the area of the hinge point of the driver (33) on the free end (42) of the toggle-joint lever

pair (40).

7. Lock according to one or more of Claims 1-6, characterized in that the cam (50) has a defined control curve (51),

-- and in that the cam (50) can be detached from the motor gearbox (53) and replaced by a cam with a control curve (51) of a different profile.

8. Lock according to one or more of Claims 1-7, characterized in that the toggle-joint lever pair (40) and/or the driver (33) and/or the guide means (15) can be detached from the housing (11) and replaced by other, similar components with different proportions and/or different profiles.